

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
23 December 2004 (23.12.2004)

PCT

(10) International Publication Number
WO 2004/110485 A1

(51) International Patent Classification⁷: **A61K 39/21, 39/285, 38/00, A61P 31/12**

(21) International Application Number: **PCT/GB2004/002512**

(22) International Filing Date: **14 June 2004 (14.06.2004)**

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data: **60/478,623 13 June 2003 (13.06.2003) US**

(71) Applicants and

(72) Inventors: **PALMOWSKI, Michael, J. [DE/GB]; Tumour Immunology Unit, Institute of Molecular Medicine, John Radcliffe Hospital, Oxford, Oxfordshire (GB). LOPES, Lucien [BR/GB]; Department of Immunology and Molecular Pathology, Windeyer Institute, University College London, London, Greater London (GB). IKEDA, Yasuhiro [JP/GB]; Department of Immunology and Molecular Pathology, Windeyer Institute, University College London, London, Greater London (GB). CERUNDOLO, Vincenzo [IT/GB]; Tumour Immunology Unit, Institute of Molecular Medicine, John Radcliffe Hospital, Oxford, Oxfordshire (GB). COLLINS, Mary, K. [GB/GB]; Department of Immunology and Molecular Pathology, Windeyer Institute, University College London, London, Greater London (GB).**

(74) Agents: **FORREST, Graham et al.; Mewburn Ellis, York House, 23 Kingsway, London, Greater London WC2B 6HP (GB).**

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— *of inventorship (Rule 4.17(iv)) for US only*

Published:

— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2004/110485 A1

(54) Title: MATERIALS AND METHODS FOR IMPROVED VACCINATION

(57) Abstract: The invention relates to materials and methods for improved vaccination strategies and in particular to the use of lentivirus comprising nucleic acid encoding an antigen, or antigen presenting cells transduced with such lentivirus, to stimulate immune responses against the encoded antigen, in heterologous prime-boost vaccination regimes.